

Region 3 Plan Summary
Metropolitan Baltimore, Maryland Ozone Nonattainment Area

Title: Ozone Nonattainment Plan for the Metropolitan Baltimore Ozone Nonattainment Area

Federal Register Dates: December 16, 1999, 64 FR 70397 (proposed rule); October 30, 2001, 66 FR 54666 (final rule); July 9, 2003, 66 FR 40861 (proposed rule), October 27, 2003 (66 FR 66103).

EPA Approval/Effective date: November 29, 2001; revised effective November 26, 2003.

State Submittal Date: April 29, 1998; revisions submitted August 18, 1998, December 21, 1998, December 28, 2000, and August 20, 2001, and September 2, 2003.

Affected Areas: Anne Arundel, Baltimore, Carroll, Harford, and Howard Counties; Baltimore City

Summary of the Plan: Maryland submitted a 1-hour ozone attainment demonstration. This demonstration consists of: Photochemical grid modeling results for three episodes representing different weather conditions, additional evidence to demonstrate attainment for the Metropolitan Baltimore nonattainment area, VOC and NO_x emission inventories, and identification of control measures needed to attain the 1-hour national ambient air quality standard (NAAQS) for ozone by November 15, 2005. EPA evaluated this information and performed additional analysis and concluded that additional assurances were needed to conclusively determine that the Metropolitan Baltimore 1-hour Ozone Attainment Plan will result in attainment. Maryland provided this assurance by committing to adopt additional control measures which would result in the EPA-identified VOC and NO_x emission reductions and to perform a mid-course review which would determine whether Maryland was still on track to attain.

Control Measures/Regulations Included As Part of the Plan:

Name of Control Measure or SIP Element	Type of Measure	Included in Local Modeling	Approval Status
Enhanced Inspection & Maintenance	CAA SIP Requirement	Yes	SIP Approved (10/29/99, 64 FR 58340; revised 1/16/03, 68 FR 2208)
NO _x RACT	CAA SIP Requirement	Yes	SIP Approved (2/8/01, 66 FR 9522); revised 5/1/03, 68 FR 23206)

VOC RACT to 25 tpy	CAA SIP Requirement	Yes	Limited SIP Approval (9/4/98, 63 FR 47174)
Stage II Vapor Recovery	CAA SIP Requirement	Yes	SIP Approved (8/4/97, 62 FR 41853; revised 5/7/03, 68 FR 24363)
On-Board Refueling Vapor Recovery	Federal Rule	Yes	Promulgated at 40 CFR Part 86
Stage I Vapor Recovery	CAA SIP Requirement	No	SIP Approved (1/6/95, 60 FR 2018; revised 12/22/98, 63 FR 70667)
Federal Motor Vehicle Control Program (Tier 0 & Tier I)	Federal Rule	Yes	Promulgated at 40 CFR Part 86
Federal Non-Road Gasoline Engines (Small Gasoline Engines)	Federal Rule	Yes	Promulgated at 40 CFR Part 90
Federal Non-Road Heavy Duty Diesel Engines	Federal Rule	Yes	Promulgated at 40 CFR Part 89
AIM Surface Coatings	Federal Rule	Yes	Promulgated at 40 CFR Part 59, subpart D
Consumer & Commercial Products	Federal Rule	Yes	Promulgated at 40 CFR Part 59, subpart C
Autobody Refinishing	State Rule	Yes	SIP- Approved (8/4/97, 62 FR 41853)
Reformulated Gasoline	Federal Rule	Yes	Promulgated at 40 CFR Part, 80 subpart D
Surface Cleaning/Degreasing	State Rule	Yes	SIP Approved (8/4/97, 62 FR 41853)
Municipal Landfills	State Rule	Yes	SIP Approved (9/8/99, 64 FR 48714)

Open Burning Ban	State Rule	Yes	SIP Approved (2/25/97, 62 FR 8380)
Lithographic Printing	State Rule	Yes	SIP Approved (9/2/97, 62 FR 46199)
Expandable Polystyrene Products	State Rule	Yes	SIP Approved (10/15/97, 64 FR 53544; revised 5/7/01, 66 FR 22924)
Yeast Manufacturing	State Rule	Yes	SIP Approved (10/15/97, 64 FR 53544)
Commercial Bakery Ovens	State Rule	Yes	SIP Approved (10/15/97, 62 FR 53544)
Screen Printing	State Rule	Yes	SIP Approved (10/15/97, 62 FR 53544)
Fiberglass Manufacturing	State Rule	Yes	SIP Approved (8/19/99, 64 FR 45182)
Marine Vessel Coating	State Rule	Yes	SIP Approved (9/5/01, 66 FR 46379)
Clean Fuel Fleets or substitute	CAA SIP Requirement	No	Requirement Substituted by NLEV; SIP Approved (12/28/99, 64 FR 72564)
National Low Emission Vehicle (NLEV)	State Opt-In	Yes	Federal program promulgated at 40 CFR Part 86, subpart R. State opt-in adopted and submitted; SIP Approved (12/28/99, 64 FR 72564)
OTC NOx MOU Phase II	State Initiative	Yes	SIP Approved (12/15/00, 65 FR 78416)
Marine Engine Standards	Federal Rule	Yes	Promulgated at 40 CFR Part 91
Railroad Engine Standards	Federal Rule	Yes	Promulgated at 40 CFR Part 92

Heavy Duty Diesel Engines (On-Road)	Federal Rule	Yes	Promulgated at 40 CFR Part 86
New Source Review	CAA SIP Requirement	No	SIP Approved (2/12/01, 66 FR 9766)
15% VOC Reduction Plan	CAA SIP Requirement	Yes ²	SIP Approved (2/3/00, 65 FR 5245)
Base Year Emissions Inventory	CAA SIP Requirement	No	SIP Approved (2/3/00, 63 FR 5245)
Emissions Statements	CAA SIP Requirement	No	SIP Approved (10/12/94, 57 FR 51517)
9% Rate of Progress Plans	CAA SIP Requirement	Yes ¹	SIP Approved (9/26/01, 66 FR 49108)
Fees for Major Sources for Failure to Attain	CAA SIP Requirement	No ²	SIP Due 12/31/2000

¹ The measures used to demonstrate rate of progress were modeled.

² This measure will only take effect if the area fails to attain by 2005 and would only be implemented after 2005.

Motor Vehicle Emissions Budget:

As of October 27, 2003 (68 FR 61103), EPA approves the following mobile budgets of the Baltimore area attainment plan:

TRANSPORTATION CONFORMITY BUDGETS FOR THE BALTIMORE AREA

Type of control strategy SIP	Year	VOC (TPD)	NO _x (TPD)
Attainment Demonstration	2005	55.3	146.9

Emission Reductions:

Attainment year inventories were developed through the use of Bureau Economic Analysis (BEA) growth factors for area source (VOC & NO_x) and point source (VOC) growth. EGAS growth factors were used for off-road mobile source (VOC & NO_x) and point source (NO_x) projections. Mobile 5b and EMS-95 were used to project on road mobile emissions. Column three of Table III.F-1 represents the percentage reduction in emissions in the Baltimore area from 1990 levels due to controls that have been adopted in the Baltimore area since 1990. Column four represents the

percentage reduction of NOx emissions from 1990 to 2005 when reductions anticipated from the NOx SIP Call are combined with reductions from all other local measures.

Table III.F-1 - Baltimore Area Emissions (tons/day)

	1990	2005	% Reduction	% Reduction with SIP Call
NOx	475	323	32.0	Approx. 46
VOC	344	224	35.0	

Commitments:

Commitment	Adoption Date	Emission Reductions in Tons per Day (TPD)
Adopt additional control measures	10/31/01	VOC- 13 TPD NOx- 0 TPD
Submit revised SIP and motor vehicle emissions budget if additional adopted measures affect the motor vehicle emissions inventory	10/31/01	Not Applicable
Revise SIP and motor vehicle emissions budget within 1 year after MOBILE6 mobile emissions model is issued	1/29/02	See SIP Revision (final rule) published on October 27, 2003, (68 FR 61103)
Perform a mid-course review and submit the results to EPA	12/31/03	Not Applicable

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